

In the Specification:

Please delete the word "and" at Page 7 and line 19.

Please delete the "." and insert --; and-- at Page 7, line 21.

Please insert the following paragraph at Page 8 beneath line 21,
--Fig. 3 shows a pyrolysis section of the petroleum cracker according to the
second embodiment of the present invention.—

Please insert the following paragraphs at page 8 above line 35, the
following paragraphs —

In a further embodiment shown in Fig. 3, the interference filter 24 could be provided in a camera 22 arranged inside the furnace and adapted to photograph the burner at regular intervals. The information from the camera 22 could then be relayed to an operator who could make any necessary adjustments to the burner from a remote location. This would clearly be advantageous in a large scale refinery or similar scale production plant where considerable numbers of personnel would be required to monitor the operation of each furnace in situ.

Ideally, the camera 22 could be programmed to photograph the burner about once every 10 minutes.

It will be appreciated that the furnace 1 would normally include a plurality of burners and, in the case of a petroleum cracker, ten or more burners could be provided. Thus if necessary, the camera 22 could be programmed to move along a row of burners and to take several pictures of respective burners or groups thereof. Camera 22 is arranged inside the furnace and adapted to photograph the burner flame at regular intervals.

The furnace 1 has means 21 for relaying the information from the camera to an operator and means 25 for making any necessary adjustments to the burner from a remote location. Means 21 and means 25 are controllers commonly known in the art for controlling, monitoring and processing information. Camera 22 is programmed to photograph the burner about once every 10 minutes using means 21. Camera 22 is programmed to move along a row of burners and to photograph groups of one or more burner flames in turn. The means for camera 22 to move along row of burners is a bar in combination with any commonly used motive force used for such purposes. –